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B8P PT

U1S S1804 S2119

(56) Documents Cited

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US 4966020 A

(58) Field of Search

UK CL (Edition R) B8P PL6 PT

INT CL⁷ E05B 73/00

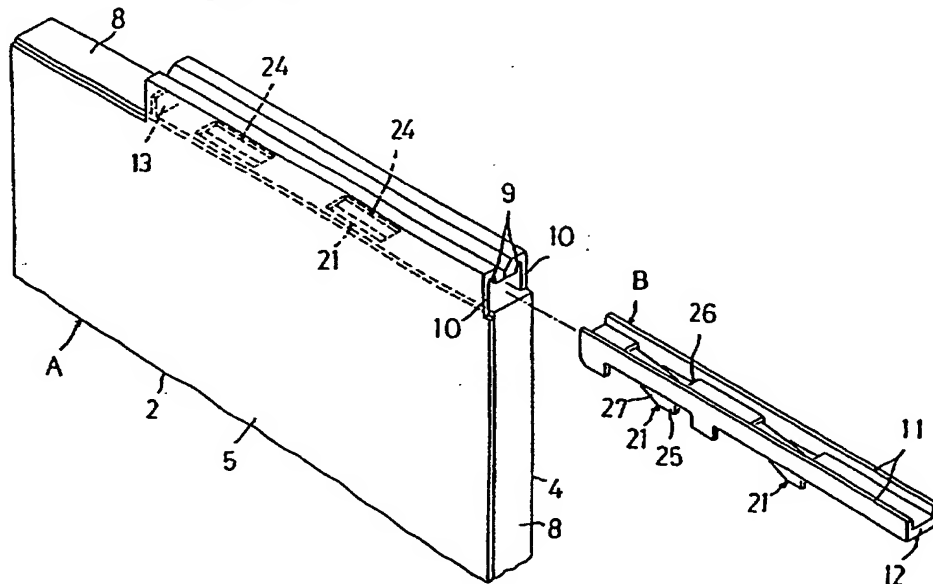
ONLINE:WPI,EPODOC,JAPIO

(54) Abstract Title

Anti-theft containers

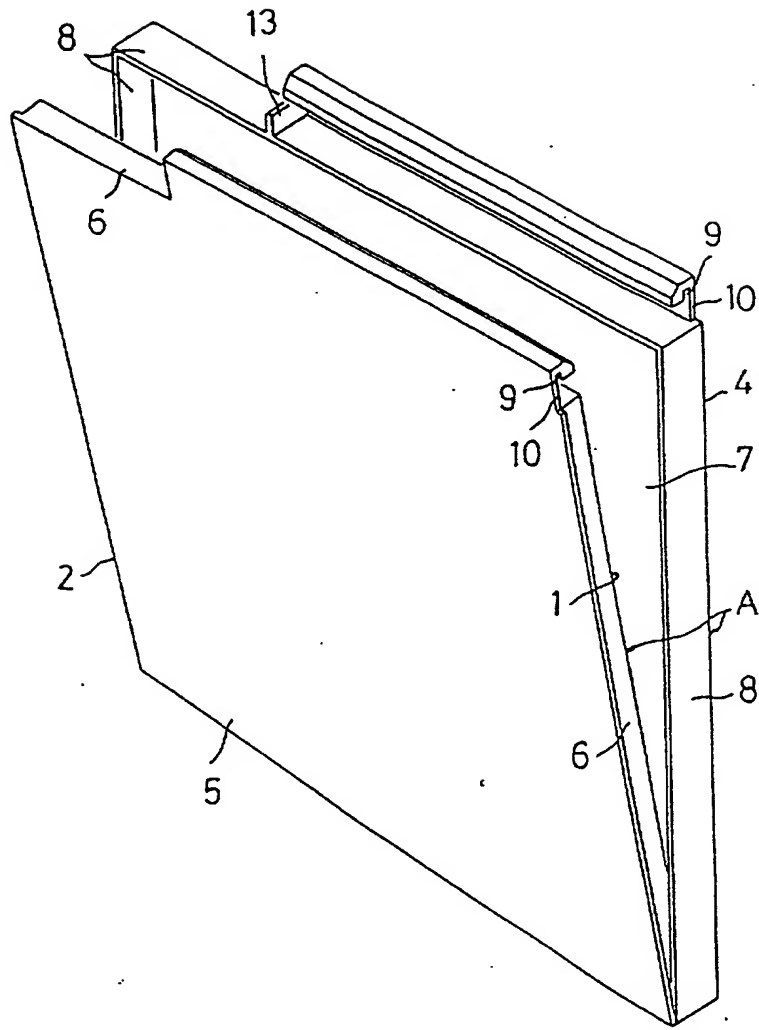
(57) A container for receiving an article comprises a casing 2 having a flange 10, a cover 4 having a flange 10 and hinged to the casing 2 and a slidable member B for engagement with the flanges 10 to hold the container in a closed condition. The slidable member B may bear an anti-theft tag and may have a V-shaped leading portion to facilitate penetration of a packaging film of the container to engage the flanges 10. Release of the slidable member is effected by insertion of a separate unlocking piece.

[FIG. 5]

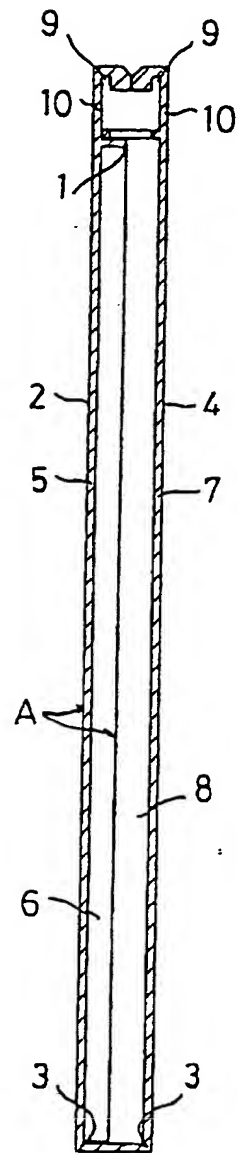


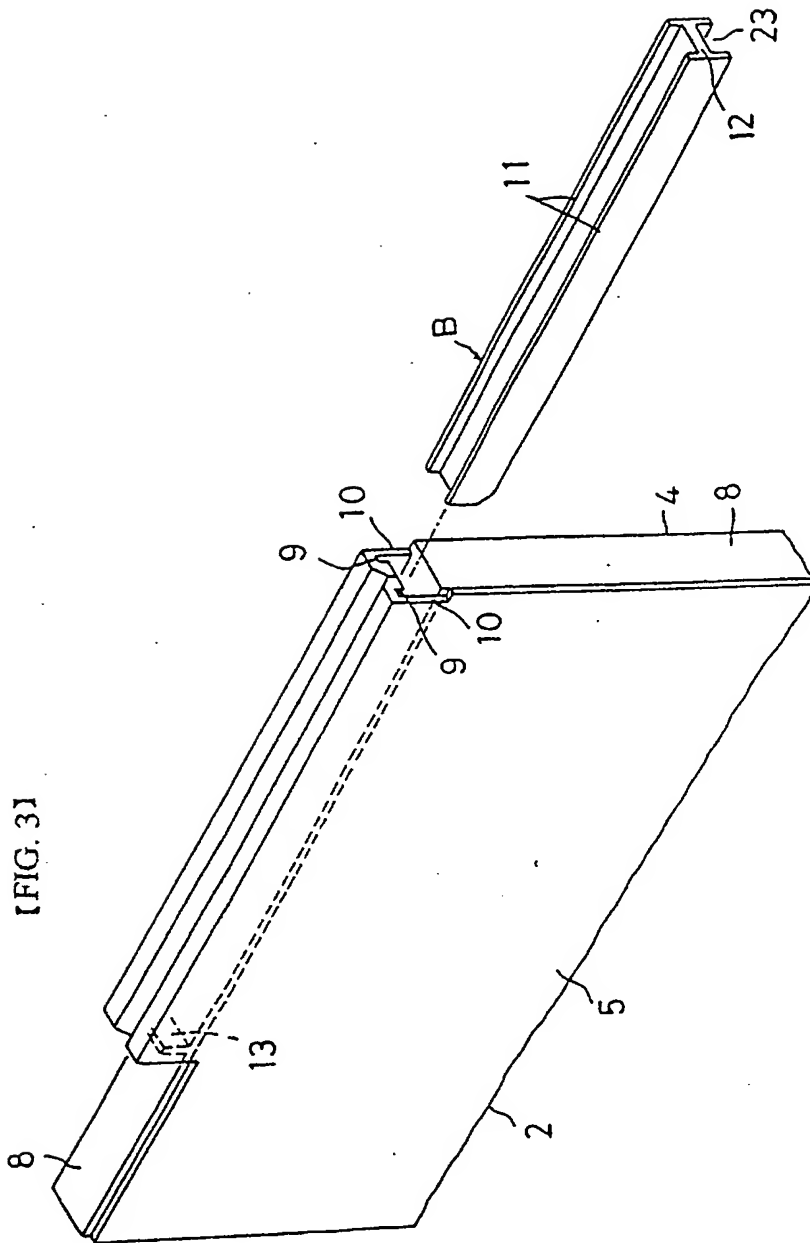
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【 FIG. 1】

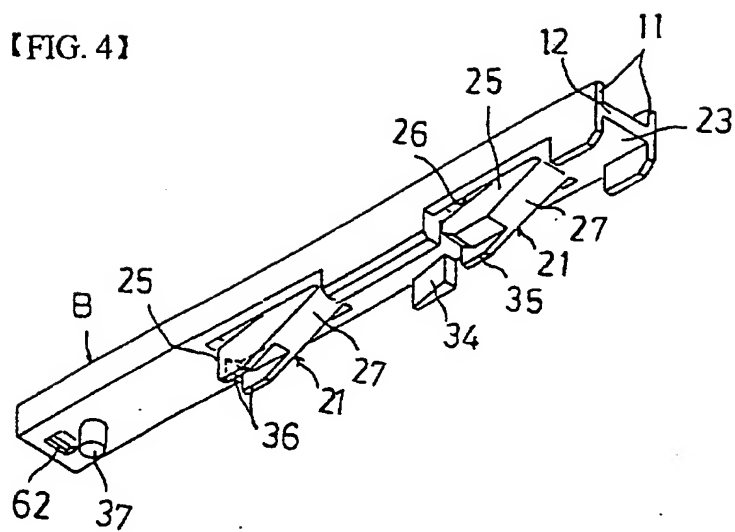


【 FIG. 2 】





【FIG. 4】



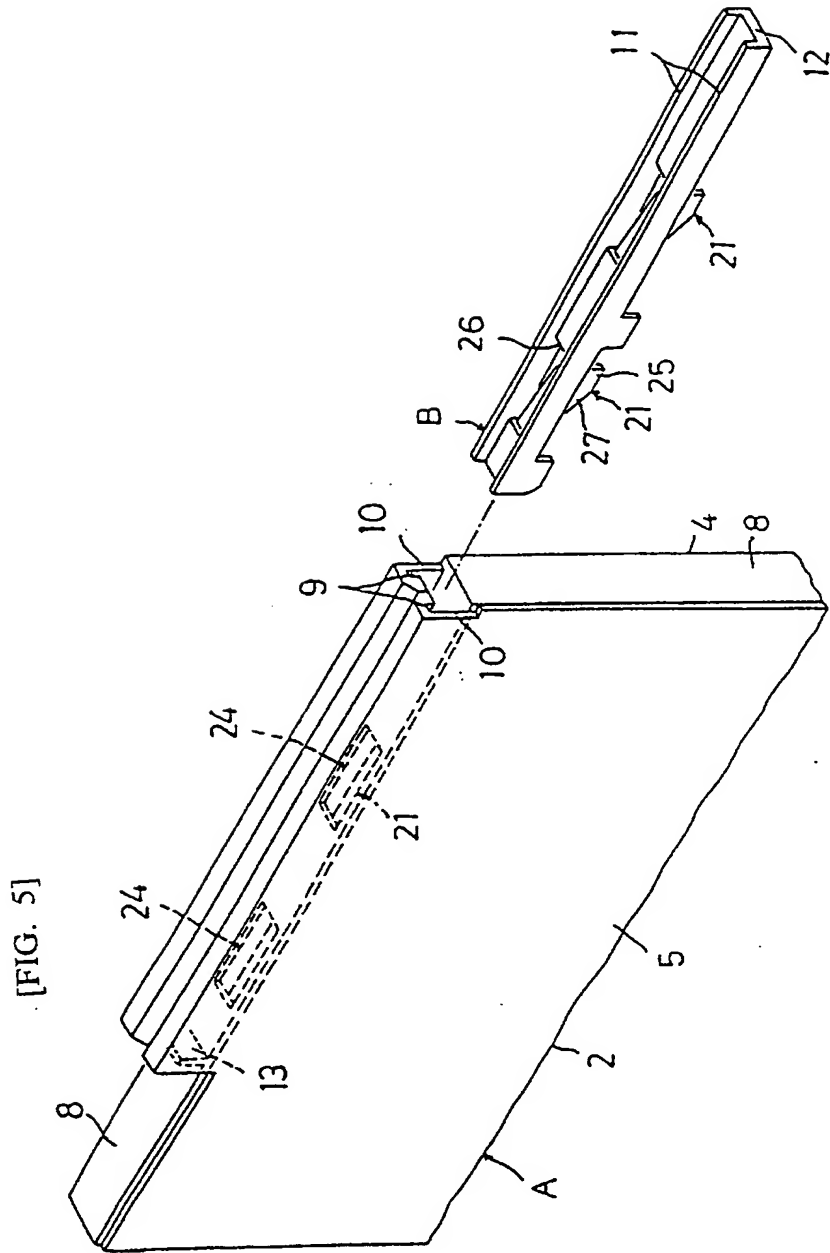


FIG. 7

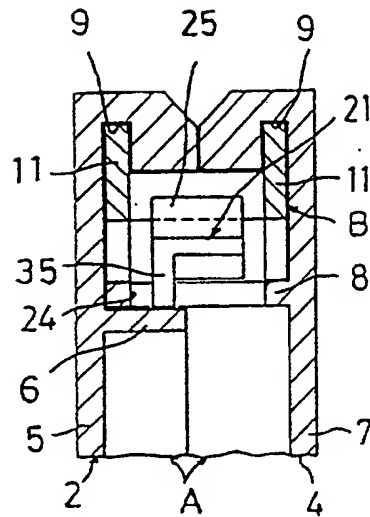


FIG. 8

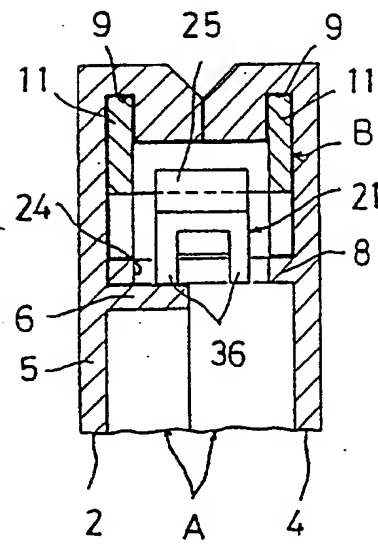


FIG. 9

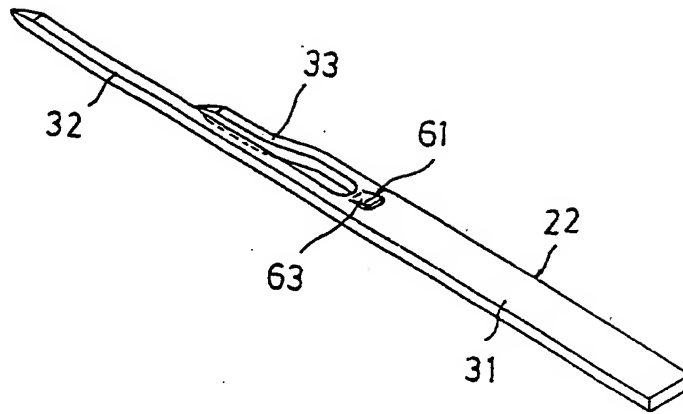


FIG. 10.

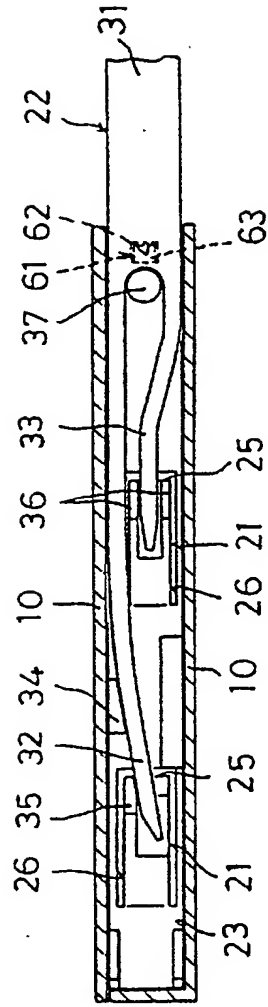


FIG. 11

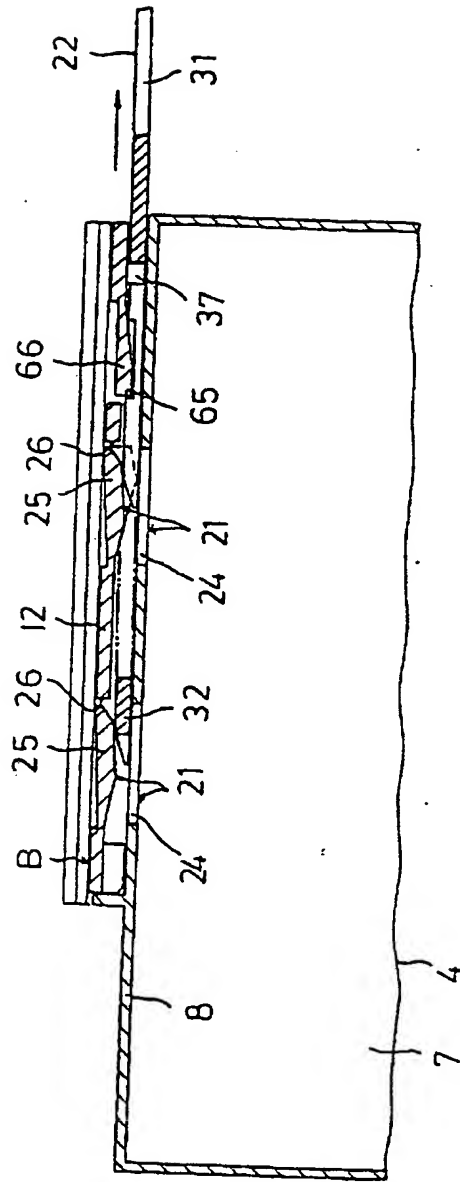
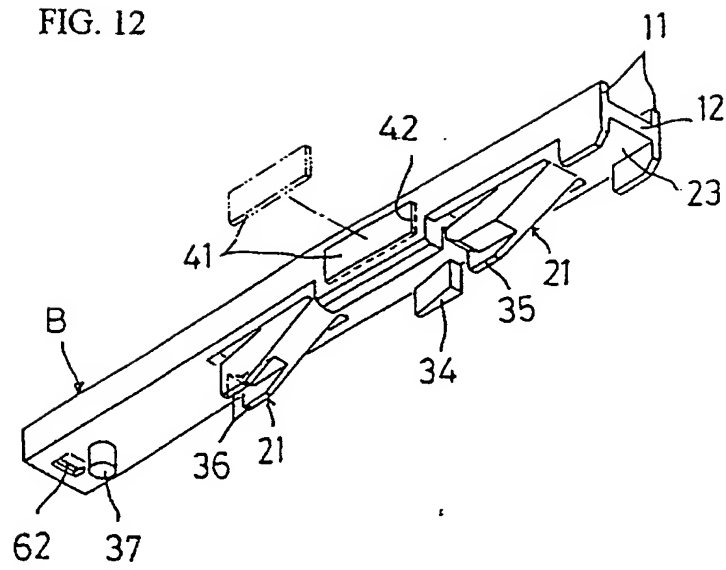


FIG. 12



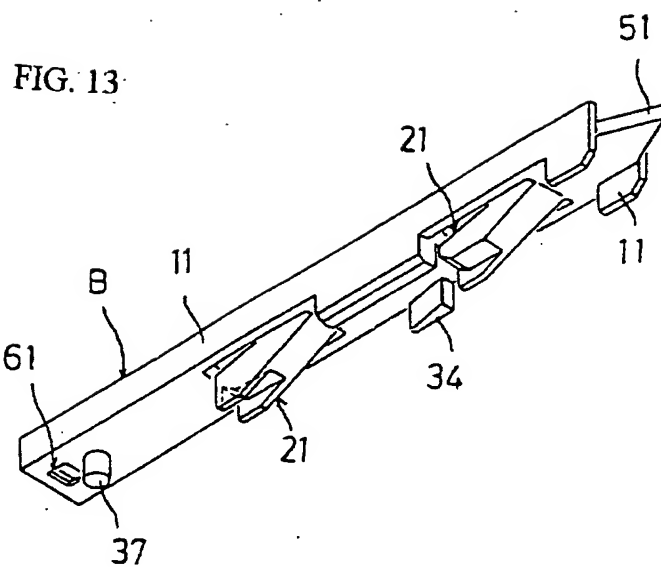


FIG. 14

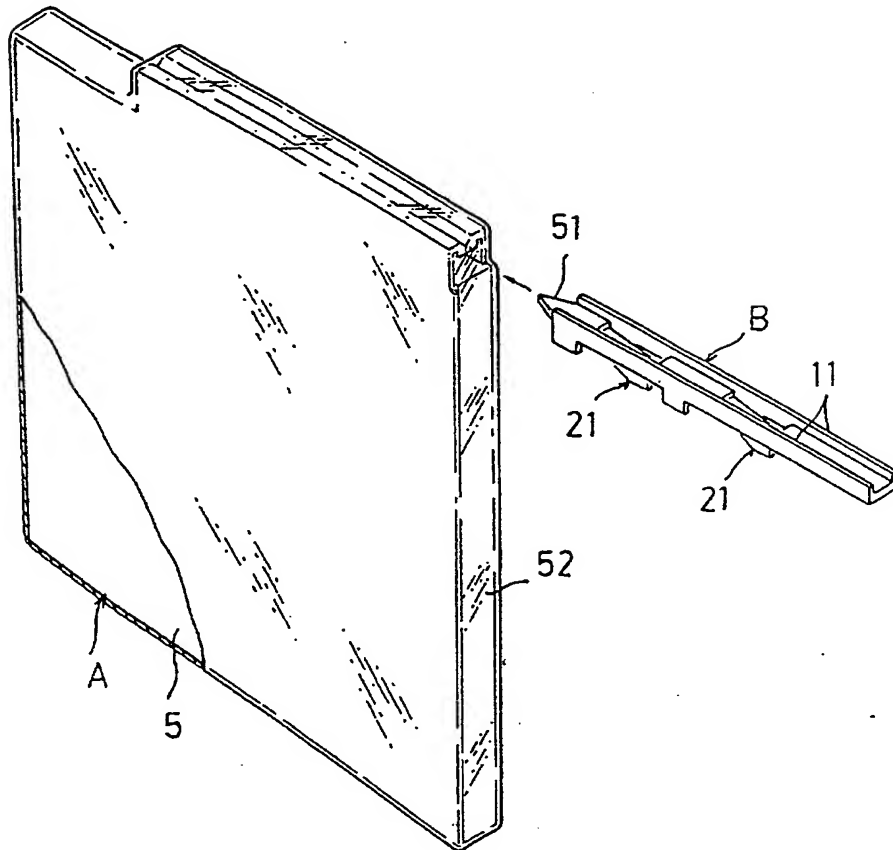


FIG. 15

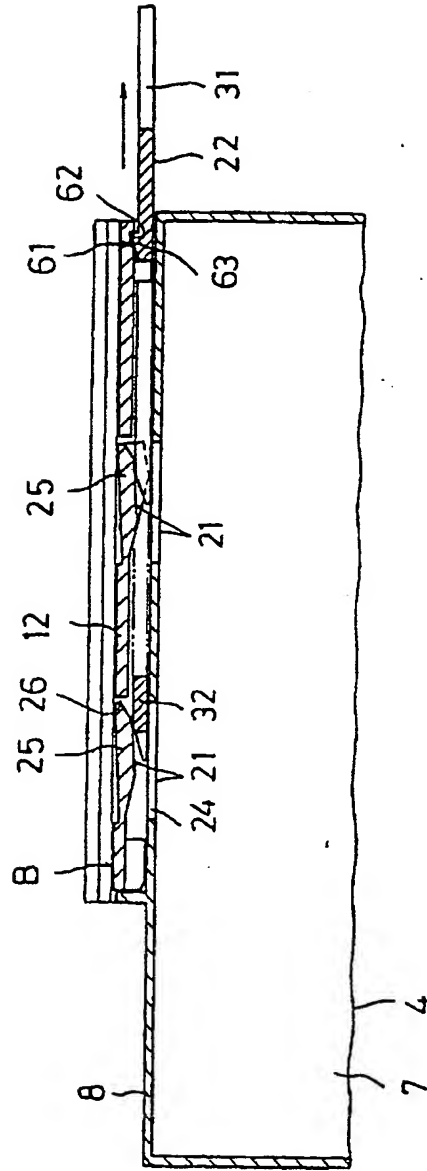


FIG. 16

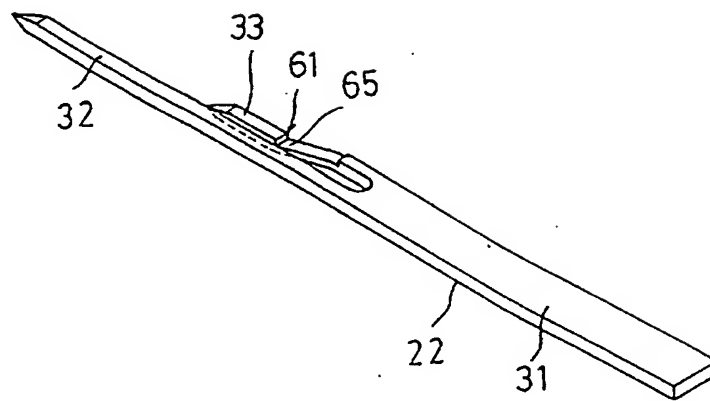


FIG. 17

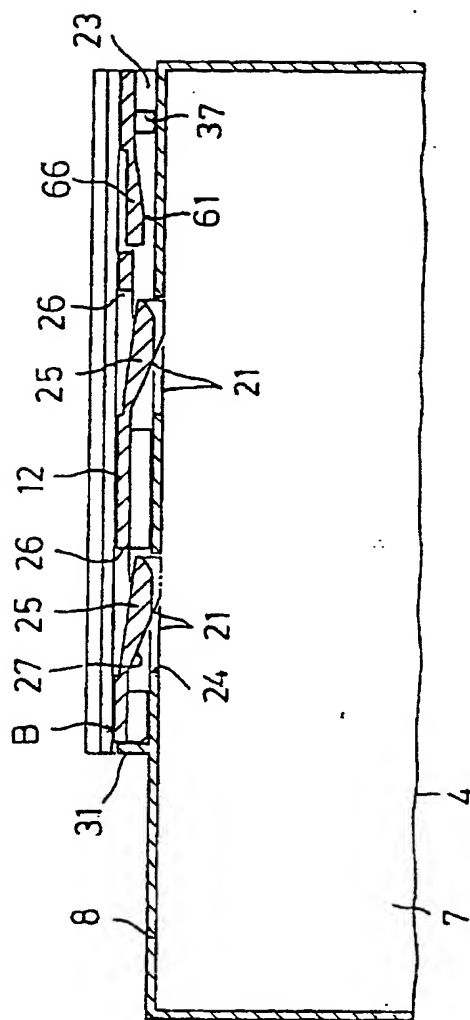


FIG. 18

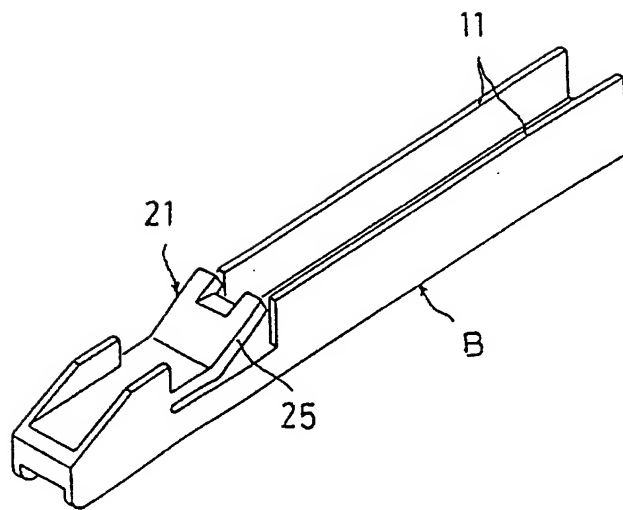
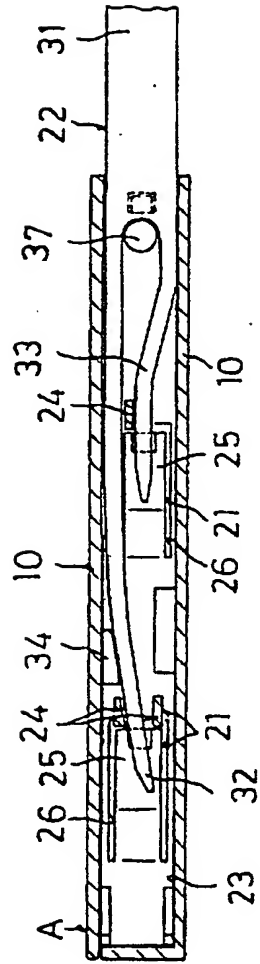
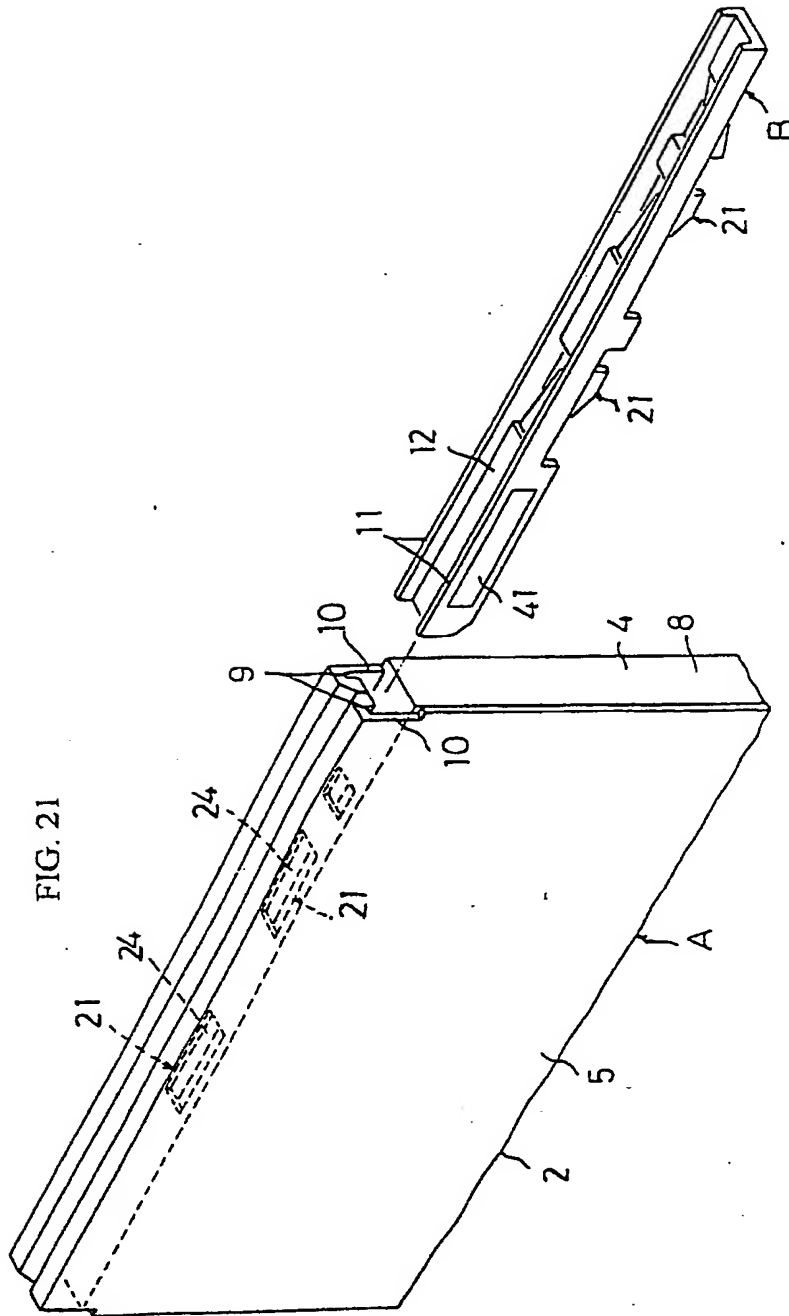


FIG. 19





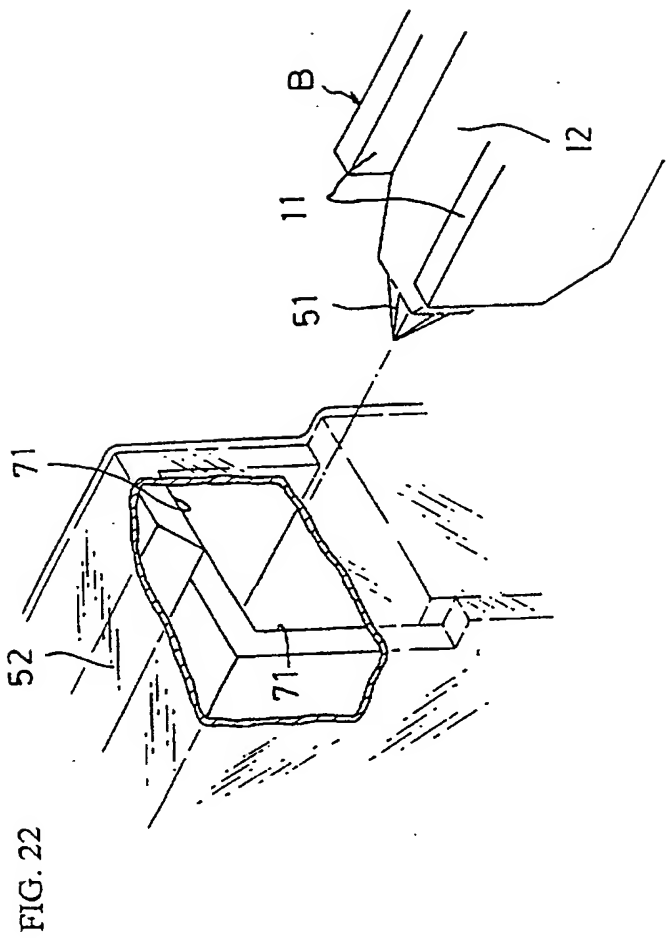


FIG. 23

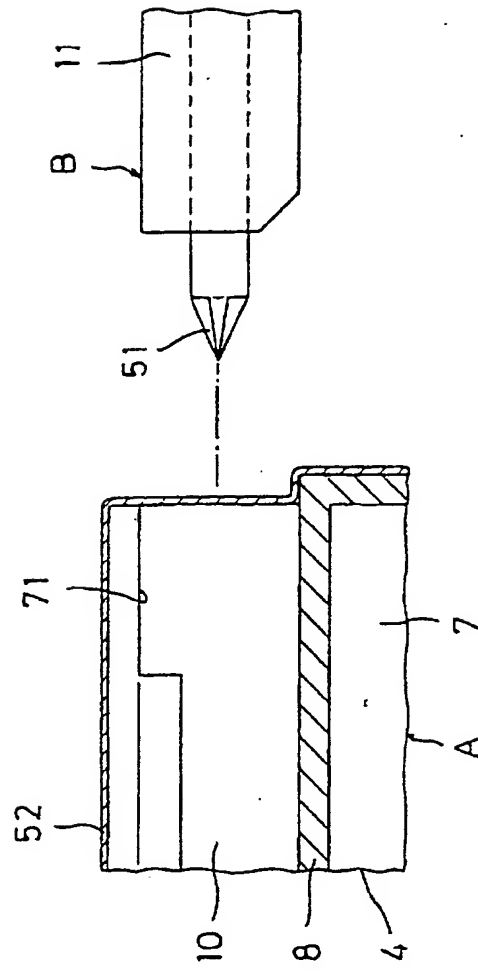


FIG. 24

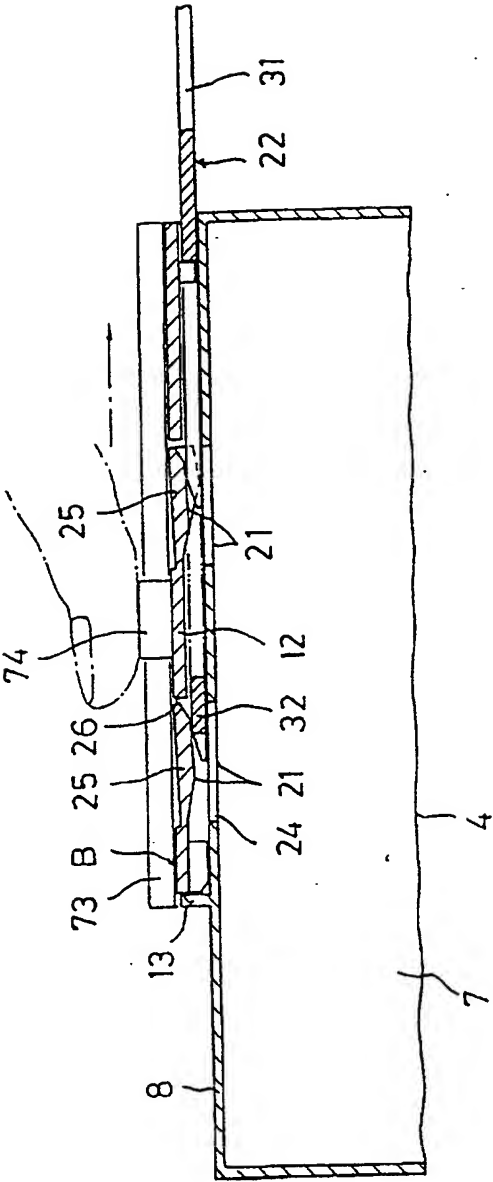


FIG. 25

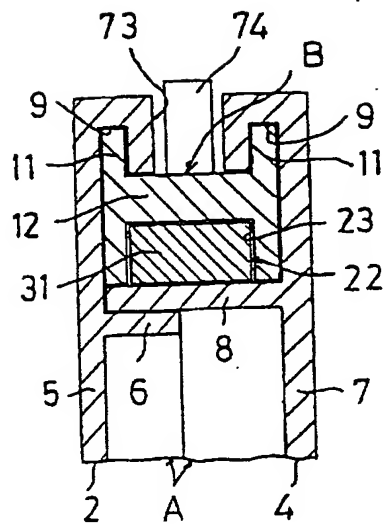
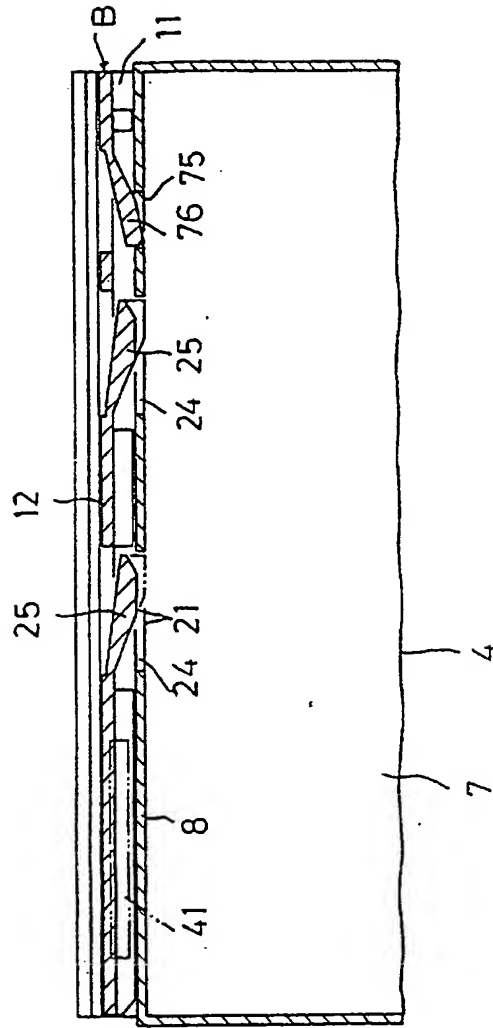


FIG. 26



CONTAINER FOR RECEIVING ARTICLE

FIELD OF THE INVENTION

The present invention relates to containers and, more particularly, to a container for receiving an article or articles which can be displayed in the shelf of a store for sale or rent and help prevent a contained article from being stolen.

BACKGROUND OF THE INVENTION

When an article, such as a video tape or a compact disk, contained in a box is displayed in the shelf of a store for sale or rent, the contained article may be easily stolen because the conventional box does not provide the anti-theft function for the contained articles, that is, there is no mechanism to prevent thieves from opening the box and stealing the contained article.

Therefore, a prior art anti-theft device is provided which consists of a detector installed on the entrance and exit of the store and theft-warning magnetic tags are adhered to the boxes or contained articles.

However, because the theft-warning magnetic tags must be adhered to all boxes or articles, it will take a lot of time and effort for tag adhering and the cost will be significantly increased.

Moreover, if the boxes adhered with tags are for sale, the intalled tags must be recovered; otherwise, it will result in the loss of tags. Of course, the same problem is also happened on the articles adhered with tags.

SUMMARY OF THE INVENTION

It is therefore an objective of the present invention to provide a container for receiving an article, which can prevent the article contained

in the box from being stolen without the need of tag adhering and detecting devices as required in the prior art.

In accordance with the foregoing and other objectives of the present invention, a container for receiving an article is provided. The container of the invention includes a casing having an access opening for placing in and removing from the casing an article therethrough and formed with an engaging flange; a cover pivotally hinged to the casing for reclosably covering the access opening and formed with an engaging flange for cooperating with the engaging flange of the casing; and a slidable member operative to be engaged with the engaging flanges for locking the cover to the casing.

The container of the invention further includes an unlocking piece operative to be engaged with a receptacle portion formed on the sliceable member for disengaging the slidable member from the container. As the slidable member is released from the engagement with the engaging flanges of the casing and the cover, the container is free to be opened by upwardly flipping the cover.

BRIEF DESCRIPTION OF THE DRAWINGS

The present invention may best be understood through the following description with reference to the accompanying drawings, in which:

Fig. 1 is a perspective view of the first embodiment of the container of the present invention;

Fig. 2 is a schematic lengthwise sectional view of the container of Fig. 1;

Fig. 3 is an exploded perspective view of the second embodiment of the present invention;

Fig. 4 is a perspective view of the slidable member utilized in the third embodiment of the present invention;

Fig. 5 is an exploded perspective view of the third embodiment of the present invention;

Fig. 6 is a schematic crosswise sectional view of the third embodiment of the present invention when the slidable member is engaged with the juxtaposed engaging flanges;

Fig. 7 is a schematic lengthwise sectional view of the third embodiment of the present invention taken along the line VII-VII shown in Fig. 6;

Fig. 8 is a schematic lengthwise sectional view of the third embodiment of the present invention taken along the line VIII-VIII shown in Fig. 6;

Fig. 9 is a perspective view of the unlocking piece utilized in the third embodiment of the container and the slidable member of the present invention;

Fig. 10 is a schematic sectional view of the unlocking piece utilized in the third embodiment of the container and the slidable member of the present invention;

Fig. 11 is a schematic crosswise sectional view of the unlocking piece utilized in the third embodiment of the present invention;

Fig. 12 is a perspective view of the slidable member utilized in the fourth embodiment of the present invention;

Fig. 13 is a perspective view of the slidable member utilized in the fifth embodiment of the present invention;

Fig. 14 is an exploded perspective view of the fifth embodiment of the present invention;

Fig. 15 is a schematic crosswise sectional view of the unlocking piece utilized in the sixth embodiment of the present invention;

Fig. 16 is a perspective view of the unlocking piece utilized in the sixth embodiment of the present invention;

Fig. 17 is a schematic crosswise sectional view of the slidable member inserted in the sixth embodiment of the container;

Fig. 18 is a perspective view of an example of the slidable member of the present invention;

Fig. 19 is a schematic sectional view of an example of the locking member of the present invention;

Fig. 20 is a schematic crosswise sectional view of Fig. 19;

Fig. 21 is an exploded perspective view of a specific embodiment of the present invention;

Fig. 22 is a perspective view showing another example of the slidable member utilized in the fifth embodiment of the present invention;

Fig. 23 is a schematic sectional view of the slidable member of Fig. 22 inserted in the container of the present invention;

Fig. 24 is a schematic crosswise sectional view of the seventh embodiment of the present invention;

Fig. 25 is a schematic lengthwise sectional view of the seventh embodiment of the present invention; and

Fig. 26 is a schematic crosswise sectional view of another example of the slidable member inserted in the juxtaposed guide slots.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

The present invention will now be described more detailedly with reference to the following embodiments. It is to be noted that the following descriptions of the preferred embodiments of this invention are

presented herein for the purpose of illustration and description only. It is not intended to be exhaustive or to be limited to the precise form disclosed.

FIRST PREFERRED EMBODIMENT

As shown in Figs. 1 and 2, the container A includes a casing 2 having an access opening 1 for placing in and removing from the casing an article therethrough, and a cover 4 pivotally hinged to the casing 2 by a hinge 3 for opening and closing the access opening.

As illustrated, the casing 2 is formed by a basewall 5 and sidewalls 6 vertically extending out from four edges of the basewall 5 and connecting with each other. The cover 4 is also formed by a basewall 7 and sidewalls 8 vertically extending out from the edges of the plate 7 and connecting with each other. The cover 4 and casing 2 are pivotally connected by the hinge 3 disposed on the lower edges of the basewalls 5 and 7, which can be made of deformable yet resilient resin. Certainly, a portion of sidewalls 6, 8 can be formed with recessed or protruded portions to hold the contained article in position in the casing 2.

In addition, two juxtaposed engaging flanges 10, 10 are formed on the upper edges of the casing 2 and the cover 4 (opposite to the lower edges with which the hinge 3 is interconnected), respectively. The engaging flanges 10, 10 are each formed with a guide slot 9 so that a slidable member (to be detailed hereafter) for engagement with the engaging flanges 10, 10 can be smoothly guided by the guide slots 9, 9 at the time the slidable member is being slid to engage with the engaging flanges 9, 9.

As shown in Fig. 2, the access ⁶ opening of the casing 2 can be sealed by the cover 4. At this time, the engaging flanges 10, 10 are arranged in parallel and abut against each other, as shown in Fig. 2.

SECOND PREFERRED EMBODIMENT

A slidable member B is slidably engaged with the engaging flanges 10, 10 for preventing the container A from being opened and protecting the article received therein from being stolen, as shown in Fig. 3.

Although the slidable member B can be withdrawn to open the cover 4, such an operation of withdrawing the slidable member B from the displayed container A will make people feel hesitant, thereby preventing the article from being stolen.

As shown in Fig. 3, the slidable member B is an integral body formed by two opposing side portions 11 and a connecting portion 12 interposed between and connected with the two side portions 11, making the slidable member B substantially H-shaped in its cross section. The guide slots 9,9 defined by the engaging flanges 10, 10 can thus engaged with the two side portions 12, 11 of the slidable member B to allow the slidable member B to move along the extension direction of the guide slots 9,9. When the slidable member B is completely engaged with the engaging flanges 10, 10, the front end of the slidable member B is stopped by the stopper 13 protruded on the upper sidewall 8 (as shown) for preventing the slidable member B from moving beyond the stopper 13. As the engagement between the side portion 11 and the guide slot 9 is made in a manner that the side portion 11 of the slidable member B is slightly clamped by the guide slot 9, the slidable member B can thus be securely engaged with the engaging flanges 10, 10. In addition, the stopper 13 can also be formed on

the end of the engaging flanges 10 relative to the front end of the slidable member B.

THIRD PREFERRED EMODIMENT

As shown in Figs. 4-6, there are a plurality of stoppers 21 integrally formed on the slidable member B corresponding to a plurality of holes or recesses 24 formed on the side wall 8 for engaging with the holes or recesses 24 to prevent the slidable member B from being withdrawn. In addition, a receptacle portion 23 is formed in the lower portion of the slidable member B to allow an unlocking piece 22 (shown in Fig. 9) to insert therein after the slidable member 13 is engaged with the engaging flanges 10, 10. When the unlocking piece 22 is entirely inserted into the receptacle portion 23, it can upwardly press the stoppers 21 from a locking position to an unlocking position, thereby allowing the slidable member B to be pulled backwards and withdrawn from the engaging flanges 10.

With the foregoing stoppers 21, the slidable member B can be securely fixed in position to the casing 2 and cover 4 to prevent a backward pull from the engaging flanges 10. When the user desires to take out the article received in the container of the invention, he or she can simply insert the unlocking piece 22 entirely into the receptacle portion 23 to disengage the stoppers 21 from the holes or recesses 24, thereby allowing the slidable member B to be pulled backwards.

As illustrated, a plurality of holes or recesses 24 are formed on the side wall 8 of the cover 4 and a plurality of stoppers 21 are positioned on the slidable member B, or vice versa. Certainly, the position of the holes or recesses 24 can be changed responsive to the shape of the slidable member B or the engaging flanges 10. As shown, the stopper 21 includes

a protruded portion 25 extended from an aperture of the connecting portion 12 of the slidable member B and toward the holes or recesses 24, and a slanted surface 27 for allowing the slidable member B to be smoothly inserted along the guide slots 9. As described in the second preferred embodiment, the slidable member B is slidably engaged with the juxtaposed engaging flanges 10, 10 to prevent the container A from being opened. As the slidable member B is inserted along the juxtaposed guide slots 9, 9, the free ends of the protruded portions 25 will be protruded into the holes or recesses 24 as shown in Fig. 6. This engagement can prevent the thief from withdrawing the slidable member B so that the container A can not be opened and the article contained in the container A will be safely kept. Certainly, the position and number of the stoppers 21 can be determined optionally. The protruded portion 25 and the slidable member B can be integrally formed and made of thermalelastic resin for providing the protruded portion 25 with elasticity, allowing the protruded portion 25 to be restored from an unlodking position to a locking position, as shown in Fig. 18.

As shown in Figs. 9-11, the unlocking piece 22 for disengaging the stoppers 21 from the holes or recesses 24 is a fork-like structure having a plate body 31 for engagement with the receptacle portion 23 and a cutaway portion separating a first finger 32 from a second finger 33 which is shorter in length than the first finger 32, wherein the first and second fingers 32, 33 extend out from the front end of the plate body 31. During the course of inserting the unlocking piece 22 into the receptacle portion 23, the first finger 32 has its front end urging against the front stopper 21, while the second finger 33 has its front end abutted on the rear stopper

21. As a result, the stoppers 21 are disengaged from the holes or recesses 24, as shown in Fig. 11.

When the unlocking piece 22 is inserted in position, the front end of the first finger 32 is guided and biased toward the underneath of the protruded portion 23 by a guiding member 34 protruded from the slidable member B and a guiding protrusion 35 protruded from one side of the front protruded portion 25, and the second finger 33 with a sharp and slender front end is guided by the juxtaposed positioning members 32 protruded from two opposite sides of the rear protruded portion 25 toward the underneath of the rear protruded portion 25.

Certainly, the unlocking piece 22 is not limited to the above-described structure. If there is only one stopper 21 formed on the slidable member B, the unlocking piece 22 only requires a finger structure formed therein.

Again, the locking member for engaging with the stopper 21 is not limited to the illustrated hole or recess. A protruded portion 24 can be formed on the side wall 8, as shown in Figs. 19 and 20, in a manner that the front ends of the first and second fingers 32 and 33 are free from being stopped by the protruded portion 24 during the course of inserting the unlocking piece 22 into the slidable member B. In the figure, symbol 37 is indicated to an inserting stopper of the unlocking piece 22.

FOURTH PREFERRED EMBODIMENT

As shown in Fig. 12, there is an anti-theft tag adhered on a desired position of the slidable member for preventing the contained article from being stolen.

If the tag 41 is a theft-warning magnetic tag, an anti-theft device or detector, such as a magnetic sensor, can be installed at the entrance and

exit of a store for detection.

As illustrated, the tag 41 is fixed to a recessed portion 42 on a side of the slidable member B by an adhensive agent. However, the installing position or method of tag is not limited to the above-described way.

Certainly, as shown in Fig. 21, the length of engaging flange 10 can be equal to the full length of the edge of container A, making the length of the slidable member B increased to be corresponding to that of the engaging flange 10. At the same time, the tag 41 can also be adhered on the elongated portion of the slidable member B.

After the article contained in the container are sold or rented, the slidable member is kept in the store, thereby significantly reducing the manufacturing cost of the container and the usage of tag adhered on the article.

FIFTH PREFERRED EMBODIMENT

As shown in Fig. 13, the front end of the slidable member B has an acute portion 51. As illustrated, the acute portion 51 has a substantially V-shaped cross section. Alternatively, the acute portion 51 can have a cross section in the screw driver shape, as shown in Fig. 22.

To sum up, as shown in Fig. 14, the acute portion 51 can prick the package film 52, such as a thermally constructed film, for enclosing the container A to thereby engaging the slidable member B with the engaging flanges 10.

Thus, even though the container A is enclosed by the film 52, the slidable member B can still be cooperated with the container A.

As shown in Figs. 22 and 23, there is an aperture 71 disposed at the insertable end of the engaging flanges 10 for slidably inserting the slidable member B therethrough. Even though the package film 52 is pricked by

the acute portion 51 for pushing the slidable member B into the engaging flanges 10, the pricked end will not enter into the aperture 71 to block the slidable member B from being inserted.

SIXTH PREFERRED EMBODIMENT

As shown in Figs. 9, 13, and 15 or Figs. 11, 16, and 17, the unlocking piece 22 has a stopper 61 formed on a surface thereof facing the slidable member B.

As illustrated, a recess 62 is formed on the slidable member B and a protruded portion 63 is formed on the unlocking piece 22. When the unlocking piece 22 is entirely inserted in position, the protruded portion 63 will be engaged with the recess 62 as shown in Fig. 15. Therefore, by backwardly pulling the unlocking piece 22, the slidable member B can also be withdrawn simultaneously (by slightly raising the unlocking piece 22). Alternatively, a recess 65 is formed on the middle portion of the second finger 33 to be engaged with an elastic piece 66 downwardly protruded from the slidable member B as the unlocking piece 22 is inserted in position so as to withdraw the combined structure of the unlocking piece 22 and the slidable member B at the same time.

SEVENTH PREFERRED EMBODIMENT

As shown in Figs. 24 and 25, there is a slit 73 formed between the two juxtaposed engaging flanges 10, 10 for allowing a protruded portion 74 upwardly extending from the slidable member B to be received therein.

Certainly, because the protruded portion 74 is received in and movable along the slit 73 as the slidable member B is slidably inserted into the engaging flanges 10, 10, the slit 73 has to be long enough to allow the protruded portion 74 to move along the slit 73 until the slidable member B is completely engaged with the engaging flanges 10, 10.

Therefore, by pressing down the protruded portion 74 and then moving backwards the slidable member B (along the arrowhead direction shown in Fig. 24), the unlocking piece 22 and the slidable member B can be withdrawn together from the engaging flanges 10, 10. As a result, the stopper 61 in the sixth preferred embodiment is not required. The protruded height of the protruded portion 74 can be adjusted as required.

Also, as shown in Fig. 26, when the slidable member B is inserted into the engaging flanges 10, 10, an elastic piece 76 downwardly protruded from the slidable member B will be engaged with the stopper 75 disposed on the side wall 8 facing the slidable member B so as to prevent the slidable member B from further sliding along the inserting direction. In this embodiment, the stopper 13 is not required. Certainly, the elastic piece 76 can be upwardly pushed by inserting the unlocking piece 22 to disengage the elastic piece 76 from the stopper 75. The engagement between the elastic piece 76 and the stopper 75 is similar to that between the stoppers 21 and holes or recesses 24 so that the detailed description is omitted.

The present invention provides an anti-theft container which can prevent the article contained therein from being stolen away. With the invention, the article contained in this anti-theft container can be taken out only by using a special unlocking piece held by the owner. The invention can therefore effectively protect the contained article against theft. When the article contained in the container are sold or rented, the slidable member can be left in the store.

Because the tag still can be adhered to the slidable member thereby eliminating the installing work for the container or article. Furthermore,

the slidable member with the tag can be left in the shore such that the tag will not be lost even though the article contained in a box are sold or rented. That is, each container does not need the slidable member because the container is used to contain the article and produced by the dealer and the slidable member is held by the owner of the shop. Thus, the slidable member with the tag can be recovered and reused, thereby significantly reducing the cost.

Because the front end of the slidable member has an acute portion, it can prick the package film of the container to insert the slidable member into the guide slots. The unlocking piece and the slidable member can be withdrawn simultaneously.

Again, the unlocking piece and the slidable member can be withdrawn together through the protruded portion embedded within the slit formed between the two guide slots and pressed by the finger tip.

In addition, an L-shaped bent piece can be disposed at the end of the slidable member to be connected with the peripheral wall 8 (not shown). Thus, the bent piece can be used as a blocker. On the other hand, the bent piece has a window to allow the unlocking piece to insert therein.

While the invention has been described in terms of what are presently considered to be the most practical and preferred embodiments, it is to be understood that the invention need not be limited to the disclosed embodiment. On the contrary, it is intended to cover various modifications and similar arrangements included within the spirit and scope of the appended claims which are to be accorded with the broadest interpretation so as to encompass all such modifications and similar structures.

CLAIMS:-

1. a container for receiving an article, comprising:
a casing having an access opening for placing in and removing from the casing an article therethrough, the casing being formed with an engaging flange;
a cover pivotally hinged to the casing for covering the access opening and formed with an engaging flange for cooperating with the engaging flange of the casing; and
A slidable member operative for engagement with the engaging flanges so as to lock the cover to the casing.
2. The container according to claim 1, wherein said slidable member has an anti-theft tag adhered thereon.
3. The container according to claim 1, wherein said slidable member has an acute portion at the front end thereof.
4. A slidable member adapted to be used with a container having a casing with an access opening for placing in and removing from the casing an article therethrough and being formed with an engaging flange, and a cover pivotally hinged to the casing for covering the access opening and formed with an engaging flange for cooperating with the engaging flange of the casing, wherein said slidable member is adapted to be engaged with the engaging flanges of the casing and cover for preventing said access opening of the casing from being opened.
5. A container for receiving an article, comprising:
a casing having an access opening for placing in and removing from

the casing an article therethrough and being formed with an engaging flange;

a cover pivotally hinged to the casing for covering the access opening and formed with an engaging flange for cooperating with the engaging flange of the casing;

a slidable member operative to be engaged with the engaging flanges for locking the cover to the casing; and

an unlocking piece operative to be engaged with the slidable member for disengaging the slidable member from the engaging flanges of the casing and cover.

6. The container according to claim 5, wherein said slidable member has an anti-theft tag adhered thereon.
7. The container according to claim 5, wherein said slidable member has an acute portion at the front end thereof.
8. The container according to claim 5, wherein said slidable member is provided with at least one protruded portion for engaging with at least one recessed portion formed on the unlocking piece.
9. The container according to claim 5, wherein the slidable member is provided with at least one recessed portion for engaging with at least one protruded portion formed on the unlocking piece.
10. The container according to claim 5, wherein a slit is formed between the engaging flanges while the casing is covered up by the cover, to allow a protruded portion protruded from the slidable member to be received therein.



Application No: GB 0015137.3
Claims searched: 1 to 10

16

Examiner: Mike Henderson
Date of search: 25 September 2000

Patents Act 1977 Search Report under Section 17

Databases searched:

UK Patent Office collections, including GB, EP, WO & US patent specifications, in:

UK Cl (Ed.R): B8P (PL6 PT)

Int Cl (Ed.7): E05B 73/00

Other: ONLINE:WPI,EPODOC,JAPIO

Documents considered to be relevant:

Category	Identity of document and relevant passage		Relevant to claims
X,E	GB 2346870A	(NISSHIN CO LTD) (Whole disclosure relevant)	4
X	EP 0589551A1	(ALPHA ENTERPRISES INC) (Whole disclosure relevant)	1,2,4 to 6,9 & 10
X	EP 0081933A1	(SONY CORP) (Whole disclosure relevant)	1 & 4
X	US 5597068	(WEISBURN et al) (Whole disclosure relevant)	1,2,4 to 6,9 & 10
X	US 4966020	(FOTHERINGHAM et al) (Whole disclosure relevant)	1 & 4

X	Document indicating lack of novelty or inventive step	A	Document indicating technological background and/or state of the art.
Y	Document indicating lack of inventive step if combined with one or more other documents of same category.	P	Document published on or after the declared priority date but before the filing date of this invention.
&	Member of the same patent family	E	Patent document published on or after, but with priority date earlier than, the filing date of this application.